



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0189; Project Identifier AD-2020-00645-R]

RIN 2120-AA64

Airworthiness Directives; Various Restricted Category Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for type certificated Model UH-1H restricted category helicopters. This proposed AD was prompted by multiple reports of failure of the main driveshaft. This proposed AD would require establishing a life limit for certain main driveshafts, and a one-time and repetitive inspections of the main driveshafts. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Army Publishing Directorate, 9301 Chapek Rd., Bldg 1458, Fort Belvoir, VA 22060-5447; telephone (703) 614-3727; email usarmy.pentagon.hqda-apd.mbx.customer-service@mail.mil; or at <https://armypubs.army.mil/>.

You may also contact the following as applicable:

Arrow Falcon Exporters Inc., 2081 S. Wildcat Way, Porterville, CA 93257; telephone (559) 781-8604; fax (559) 781-9271; email afe@arrowfalcon.com.

Global Helicopter Technology, Inc., P.O. Box 180681 Arlington, Texas 76096; telephone (817) 557-3391; email ghti@ghti.net.

Hagglund Helicopters, LLC, 5101 NW A Avenue, Pendleton, OR 97801; telephone (800) 882-3554 or (541) 276-3554; fax (541) 276-1597.

JASPP Engineering Services, LLC., 511 Harmon Terrace, Arlington, TX 76010; telephone (817) 465-4495; or at www.jjaspp.com.

Northwest Rotorcraft, LLC, 1000 85th Ave., SE Olympia WA 98501; telephone (360) 754-7200; or at www.nwhelicopters.com.

Overseas Aircraft Support, Inc., P. O. Box 898, Lakeside, AZ 85929; telephone (928) 368-6965; fax (928) 368-6962.

Richards Heavylift Helo, Inc., 1181 Osprey Nest Point, Orange Park, FL 32073; (904) 472-1481; email Glenn7444@msn.com.

Rotorcraft Development Corporation, P.O. Box 430, Corvallis, MT 59828; telephone (207) 329-2518; email administration@rotorcraftdevelopment.com.

Southwest Florida Aviation International, Inc., 28000-A9 Airport Road, Bldg. 101, Punta Gorda, FL 33982-9587; telephone (941) 637-1161; fax (941) 637-6264; email info@swfateam.org.

Tamarack Helicopters, Inc., 2849 McIntyre Rd., Stevensville, MT 59870; telephone (406) 777-0144; or at www.tamarackhelicopters.com.

You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0189; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Matthew L. Thompson, Aerospace Engineer, DSCO Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5251; email matthew.l.thompson@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0189; Project Identifier AD-2020-00645-R” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all

comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Matthew L. Thompson, Aerospace Engineer, DSCO Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5251; email matthew.l.thompson@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA proposes to adopt a new AD for type certificated Model UH-1H restricted category helicopters. The type certificate holders for these helicopters include but are not limited to Arrow Falcon Exporters Inc.; Global Helicopter Technology, Inc.; Hagglund Helicopters, LLC; JJASPP Engineering Services, LLC.; Northwest Rotorcraft, LLC; Overseas Aircraft Support, Inc.; Richards Heavylift Helo, Inc.; Rotorcraft Development Corporation; Southwest Florida Aviation International, Inc.; and Tamarack Helicopters, Inc.

This proposed AD was prompted by multiple reports of failure of a main driveshaft. This proposed AD would require establishing a life limit for certain part-numbered main driveshafts, removing and inspecting the main driveshaft, inspecting the alignment of the main driveshaft installation, and repetitive inspections of the main driveshaft. As an optional terminating action, this AD allows the installation of a certain part-numbered main driveshaft not affected by this unsafe condition. This condition, if not addressed, could result in loss of engine power to the transmission and subsequent loss of control of the helicopter.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Headquarters, Department of the Army, Aviation Unit and Intermediate Maintenance Instructions Army Model UH-1H/V/EH-1H/X Helicopters, Technical Manual TM 55-1520-210-23-1, Change No. 42, dated April 14, 2003. This service information contains main driveshaft assembly figures and specifies procedures for the main driveshaft disassembly, cleaning, inspecting, repairing, lubricating and assembly, installing, and inspecting and correction of its alignment.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Proposed AD Requirements in this NPRM

This proposed AD would require, before further flight after the effective date of this AD, establishing a life limit of 5,000 hours time-in-service (TIS) for KAflex main driveshaft part number (P/N) SKCP2180-1, SKCP2281-1, SKCP2281-1R, and

SKCP2281-103. This proposed AD would also require, within 25 hours TIS after the effective date of this AD, removing the main driveshaft and inspecting the main driveshaft for any broken, loose, or missing hardware; each flex frame and mount bolt torque stripe for movement; each joint for fretting corrosion; the main driveshaft for damage; and the alignment of the main driveshaft, and if required, adjusting the alignment. This proposed AD would then require, at intervals not to exceed 300 hours TIS, repeating the inspections with the main driveshaft installed.

As an optional terminating action, this proposed AD would allow installing KAflex main driveshaft P/N SKCP3303-1.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 384 helicopters of U.S. registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates that operators may incur the following costs in order to comply with this proposed AD.

Determining the total hours TIS of the main driveshaft would take about 0.5 work-hour for an estimated cost of about \$43 per helicopter and \$16,512 for the U.S. fleet. Removing and inspecting the main driveshaft would take about 4 work-hours for an estimated cost of \$340 per helicopter and \$130,560 for the U.S. fleet. Inspecting the installed main driveshaft would take about 1 work-hour for an estimated cost of about \$85 per helicopter and \$32,640 for the U.S. fleet, per inspection cycle. Inspecting the alignment of the main driveshaft installation would take about 2 work-hours for an estimated cost of \$170 per helicopter and \$65,280 for the U.S. fleet. If required, adjusting the alignment would take about 0.5 work-hour for an estimated cost of \$43 per instance. Replacing a main driveshaft would take about 1 work-hour and parts would cost about

\$54,000, for an estimated cost of \$54,085 per replacement.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Various Restricted Category Helicopters: Docket No. FAA-2021-0189; Project Identifier AD-2020-00645-R.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to restricted category Model UH-1H helicopters; current type certificate holders include but are not limited to Arrow Falcon Exporters Inc.; Global Helicopter Technology, Inc.; Hagglund Helicopters, LLC; JJASPP Engineering Services, LLC.; Northwest Rotorcraft, LLC; Overseas Aircraft Support, Inc.; Richards Heavylift Helo, Inc.; Rotorcraft Development Corporation; Southwest Florida Aviation International, Inc.; and Tamarack Helicopters, Inc., with KAflex main driveshaft part number (P/N) SKCP2180-1, SKCP2281-1, SKCP2281-1R, or SKCP2281-103 installed.

Note 1 to paragraph (c): Helicopters with an SW205 designation are Southwest Florida Aviation International, Inc., Model UH-1H helicopters.

(d) Subject

Joint Aircraft System Component (JASC) Code: 6310, Engine/Transmission Coupling.

(e) Unsafe Condition

This AD was prompted by multiple reports of failure of the main driveshaft. The unsafe condition, if not addressed, could result in loss of engine power to the transmission and subsequent loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Before further flight after the effective date of this AD, determine the total hours time-in-service (TIS) of the main driveshaft.

(i) If the main driveshaft has accumulated less than 5,000 total hours TIS, before exceeding 5,000 total hours TIS, remove the main driveshaft from service.

(ii) If the main driveshaft has accumulated 5,000 or more total hours TIS, before further flight, remove the main driveshaft from service.

(2) Thereafter following paragraph (g)(1) of this AD, remove the main driveshaft from service before accumulating 5,000 total hours TIS.

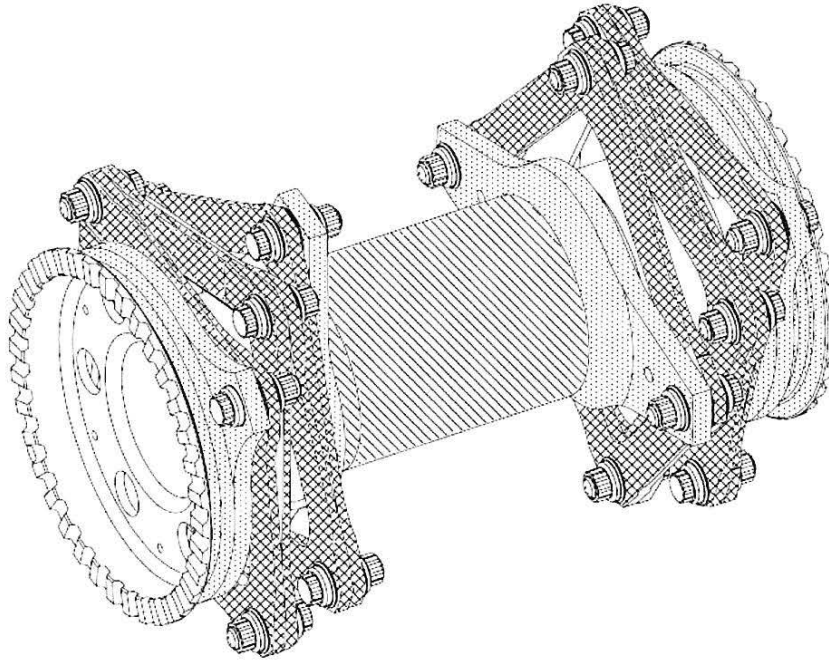
(3) Within 25 hours TIS after the effective date of this AD, remove main driveshaft P/N SKCP2180-1, SKCP2281-1, SKCP2281-1R, or SKCP2281-103 by following 6-24.3. Removal – Main Driveshaft P/N SKCP2281-103, of Headquarters, Department of the Army, Aviation Unit and Intermediate Maintenance Instructions Army Model UH-1H/V/EH-1H/X Helicopters, Technical Manual TM 55-1520-210-23-1, Change No. 42, dated April 14, 2003 (TM 55-1520-210-23-1) and:

(i) Inspect for any broken, loose, or missing hardware. If there is broken or loose hardware, before further flight, remove the driveshaft from service. If there is missing hardware, before further flight, replace the driveshaft.





(ii) Visually inspect each flex frame and mount bolt torque stripe (red or yellow) for movement. If there is any torque stripe movement, before further flight, replace the driveshaft.

(iii) Visually inspect each joint for fretting corrosion, which may be indicated by red metallic particles. If there is any grease, oil, or dirt covering a joint, clean the area and visually inspect again. If there is any fretting corrosion, before further flight, replace the driveshaft.

(iv) Inspect the main driveshaft for mechanical damage, corrosion, an edge dent, and nick as shown in Figure 1 to paragraph (g)(3)(iv) of this AD. For the purposes of this inspection, mechanical damage may be indicated by a crack, scratch, or wear; and corrosion may be indicated by corrosion or pitting. If there is a scratch, wear, corrosion, pitting, an edge dent, or a nick within allowable limits, before further flight, repair the main driveshaft in accordance with FAA-approved procedures. If there is a crack, or a scratch, wear, corrosion, pitting, an edge dent, or a nick that exceeds allowable limits, before further flight, replace the driveshaft.



DAMAGE LOCATION SYMBOLS

Type of Damage	Maximum Damage and Repair Depth			
				
MECHANICAL	0.001" before and after repair	0.005" before and after repair	0.005" before and after repair	0.015" before and after repair
CORROSION	Surface, no pits	0.005" before and after repair	0.005" before and after repair	0.010" before and after repair
MAXIMUM AREA PER FULL DEPTH REPAIR	0.05 in ²	0.10 in ²	0.25 in ²	0.25 in ²
NUMBER OF REPAIRS	One per leg			
EDGE DENTS, NICKS	0.001 in	0.010 in	0.010 in	0.025 in

1. No cracks are permitted
2. Repairs must be no less than 1.000 inch apart.
3. Repairs not to be within 0.500 inches of bolt hole.
4. Faying surfaces must be free of any raised metal areas.
5. All repairs to be smooth at maximum depth and smoothly blended with surrounding surface.
6. Exposed bare metal may be touched up with Sermetel Product 1122 or 196. Zinc Chromate, primer color T, even though it does not blend cosmetically with Sermetel coating, can be used if Sermetel touch-up products are unavailable.

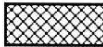
7. Sides and corners of flex frames are to be treated as  areas.

Figure 1 to Paragraph (g)(3)(iv) – Damage Limits

(4) Before installing the main driveshaft following paragraph (g)(3) of this AD, and with the engine adapter installed in the end of the engine output shaft, inspect the alignment of the main driveshaft installation between the transmission input drive quill coupling and the engine output shaft adapter by following 6-24. Alignment – Main Driveshaft, paragraphs c. through g., of TM 55-1520-210-23-1. If there is misalignment, before further flight, adjust the alignment by following 6-24. Alignment – Main Driveshaft, paragraphs h. through j., of TM 55-1520-210-23-1.

(5) Within 300 hours TIS after the effective date of this AD, and thereafter within intervals not to exceed 300 hours TIS, with the main driveshaft installed, accomplish the actions in paragraphs (g)(3)(i) through (iv) of this AD.

(6) As an optional terminating action for the requirements of this AD, you may install KAflex main driveshaft P/N SKCP3303-1.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, DSCO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information. Information may be emailed to: 9-ASW-190-COS@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Matthew L. Thompson, Aerospace Engineer, DSCO Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5251; email matthew.l.thompson@faa.gov.

(2) For service information identified in this AD, contact Army Publishing Directorate, 9301 Chapek Rd., Bldg 1458, Fort Belvoir, VA 22060-5447; telephone (703) 614-3727; email usarmy.pentagon.hqda-apd.mbx.customer-service@mail.mil; or at <https://armypubs.army.mil/>. You may view the service information identified in this AD at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. You may also contact the following, as applicable:

(i) Arrow Falcon Exporters Inc., 2081 S. Wildcat Way, Porterville, CA 93257; telephone (559) 781-8604; fax (559) 781-9271; email afe@arrowfalcon.com.

(ii) Global Helicopter Technology, Inc., P.O. Box 180681 Arlington, Texas 76096; telephone (817) 557-3391; email ghti@ghti.net.

(iii) Hagglund Helicopters, LLC, 5101 NW A Avenue, Pendleton, OR 97801; telephone (800) 882-3554 or (541) 276-3554; fax (541) 276-1597.

(iv) JASPP Engineering Services, LLC., 511 Harmon Terrace, Arlington, TX 76010; telephone (817) 465-4495; or at www.jjaspp.com.

(v) Northwest Rotorcraft, LLC, 1000 85th Ave., SE Olympia WA 98501; telephone (360) 754-7200; or at www.nwhelicopters.com.

(vi) Overseas Aircraft Support, Inc., P. O. Box 898, Lakeside, AZ 85929; telephone (928) 368-6965; fax (928) 368-6962.

(vii) Richards Heavylift Helo, Inc., 1181 Osprey Nest Point, Orange Park, FL 32073; (904) 472-1481; email Glenn7444@msn.com.

(viii) Rotorcraft Development Corporation, P.O. Box 430, Corvallis, MT 59828; telephone (207) 329-2518; email administration@rotorcraftdevelopment.com.

(ix) Southwest Florida Aviation International, Inc., 28000-A9 Airport Road, Bldg. 101, Punta Gorda, FL 33982-9587; telephone (941) 637-1161; fax (941) 637-6264; email info@swfateam.org.

(x) Tamarack Helicopters, Inc., 2849 McIntyre Rd., Stevensville, MT 59870;
telephone (406) 777-0144; or at www.tamarackhelicopters.com.
Issued on March 12, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.
[FR Doc. 2021-05561 Filed: 3/25/2021 8:45 am; Publication Date: 3/26/2021]